# Fate Report for Case # P-18-0102

## Fate
## Summary Statement

**Fate Summary Statement:** P-18-0102

FATE: [redacted]

S = Disp.
VP < 1.0E-6 torr at 25 °C (E)
BP > 400 °C (E)

H < 1.00E-8 (E)
POTW removal (%) = 90 via sorption
Time
for complete ultimate aerobic biodeg > mo
Sorption to
soils/sediments = v.strong
PBT Potential: P3B1
*CEB FATE:
Migration to ground water = negl

PMN Material:
Overall
wastewater treatment removal is 90% via sorption.
Sorption to sludge
is strong based on high molecular volume.
Air Stripping
(Volatilization to air) is negligible based on high molecular volume.

Removal by biodegradation in wastewater treatment is negligible based on high molecular volume.
The aerobic aquatic biodegradation
half-life is greater than months based on high molecular volume.

The anaerobic aquatic biodegradation half-life is greater than months based on the aerobic biodegradation half-life. The anaerobic biodegradation half-life is greater than or equal to the aerobic biodegradation half-life.
Sorption to soil and sediment is
very strong based on high molecular volume.
Migration to
groundwater is negligible based on high molecular volume.
PMN

Material:
High Persistence (P3) is based on the estimated anaerobic biodegradation half-life.
Low Bioaccumulation potential (B1) is based on high molecular volume.
Bioconcentration/Bioaccumulation factor to be put into E-Fast: N/A

[redacted]

**Fate Assessor:** Lee, WenHsiung

**SMILES:**

## Physical Properties

| Property | Measured/Calculated Value | EPI |
|---|---|---|
| **Molecular Form:** | [redacted] | |
| **Molecular Wt.:** | | |
| **% < 500:** | [redacted] | |
| **% < 1000:** | | |

| Property | Measured Value | Method | Estimated Value | Method | EPI |
|---|---|---|---|---|---|
| **Melting Point:** | | | | | |
| **Boiling Point:** | | | | | |
| **BP Pressure:** | | | @760 | | @760 |
| **Vapor Pressure:** | | | <0.000001 | Salt | |
| **Water Solubility:** | | | Dispersible | Salt | |
| **Log P:** | | | | | |
| **Log Kow:** | | | | | |
| **Log Koc:** | | | | | |
| **Log BCF:** | | | | | |

| Property | Measured Value | Method | Estimated Value | Method | EPI |
|---|---|---|---|---|---|
| Henry's Law: | | | | | |

| | |
|---|---|
| pH: | |
| pH Comment: | |

## Fate Analysis

| | | |
|---|---|---|
| Hydrolysis (t1/2, da): | Volatilization (t1/2) - River (hr): | Volatilization (t1/2) - Lake (da): |
| Atm Ox Potential (t1/2)OH (hr): | Atm Ox Potential (t1/2)O3 (hr): | Atm Ox Potential (t1/2) Total (hr): |
| MITI Linear: | MITI NonLinear: | |
| Biodeg Linear: | Biodeg NonLinear: | |
| Biodeg Survey ult: | Biodeg Survey Prim: | |
| STP (% removal) Total: | STP (% removal) Biodeg: | |
| STP (% removal) Ads: | STP (% removal) Air: | |

## Rationales

| | |
|---|---|
| Removal in Wastewater Treatment: | |
| Atmospheric Oxidation: | |
| Hydrolysis: | |
| Photolysis: | |
| Aerobic Biodegradation: | |
| Anaerobic Biodegradation: | |
| Sorption to Soil and Sediment: | |
| Migration to Groundwater: | |

| | |
|---|---|
| **Persistence - Air:** | |
| **Persistence - Water:** | |
| **Volatilization from Water:** | |
| **Soil:** | |
| **Sediment:** | |
| **Other:** | |
| **Standard:** | |
| **Bioaccumulation:** | |

## PBT Ratings

| Persistence | Bioaccumulation | Toxicity | PBT Comments |
|---|---|---|---|
| **3** | 1 | 2 | |

## Exposure-Based Testing

| | |
|---|---|
| **Exposure-Based Testing:** | |

## Fate Ratings

### Removal in WWT/POTW (Overall):

| | |
|---|---|
| **Removal in WWT/POTW (Overall):** | 90 |

| Condition | Rating Values | Rating Description | | | | Comment |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | |
| **WWT/POTW Sorption:** | 3 | Low | Moderate | Strong | V. Strong | |
| **WWT/POTW Stripping:** | 4 | Extensive | Moderate | Low | Negligible | |
| **Biodegradation Removal:** | 4 | Unknown | High | Moderate | Negligible | |
| **Biodegradation Destruction:** | | Unknown | Complete | Partial | — | |
| **Aerobic Biodeg Ult:** | 4 | <= Days | Weeks | Months | > Months | |
| **Aerobic Biodeg Prim:** | | <= Days | Weeks | Months | > Months | |

| Condition | Rating Values | Rating Description | | | | Comment |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | |
| **Anaerobic Biodeg Ult:** | 4 | <= Days | Weeks | Months | > Months | |
| **Anaerobic Biodeg Prim:** | | <= Days | Weeks | Months | > Months | |
| **Hydrolysis (t1/2 at pH 7,25C) A:** | | <= Minutes | Hours | Days | >= Months | |
| **Hydrolysis (t1/2 at pH 7,25C) B:** | | <= Minutes | Hours | Days | >= Months | |
| **Sorption to Soils/Sediments:** | 1 | V. Strong | Strong | Moderate | Low | |
| **Migration to Ground Water:** | 1 | Negligible | Slow | Moderate | Rapid | |
| **Photolysis A, Direct:** | | Negligible | Slow | Moderate | Rapid | |
| **Photolysis B, Indirect:** | | Negligible | Slow | Moderate | Rapid | |
| **Atmospheric Ox A, OH:** | | Negligible | Slow | Moderate | Rapid | |
| **Atmospheric Ox B, O3:** | | Negligible | Slow | Moderate | Rapid | |

## Bio Comments:

| | |
|---|---|
| **Bio Comments:** | |

## Fate Comments:

| | |
|---|---|
| **Fate Comments:** | PMN Material:<br>Overall<br>wastewater treatment removal is 90% via sorption.<br>Sorption to sludge<br>is strong based on high molecular volume.<br>Air Stripping<br>(Volatilization to air) is negligible based on high molecular volume.<br><br>Removal by biodegradation in wastewater treatment is negligible based on high molecular volume. |

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## Comments/Telephone Log

| Artifact | Update/Upload Time |
|---|---|